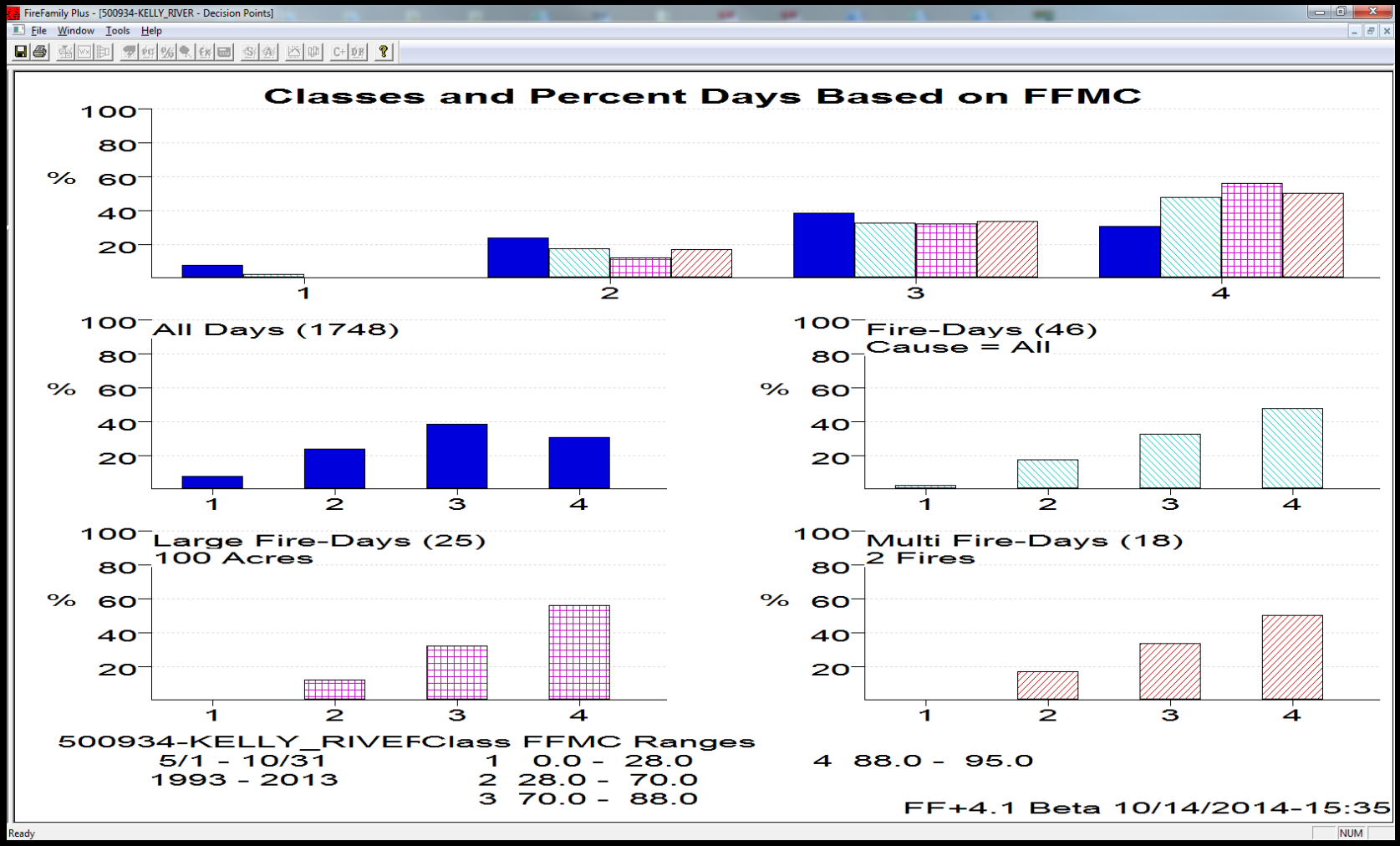
CFFDRS in Alaska Summit

How is CFFDRS being used in Alaska Now

Jurisdictional Agency – NPS

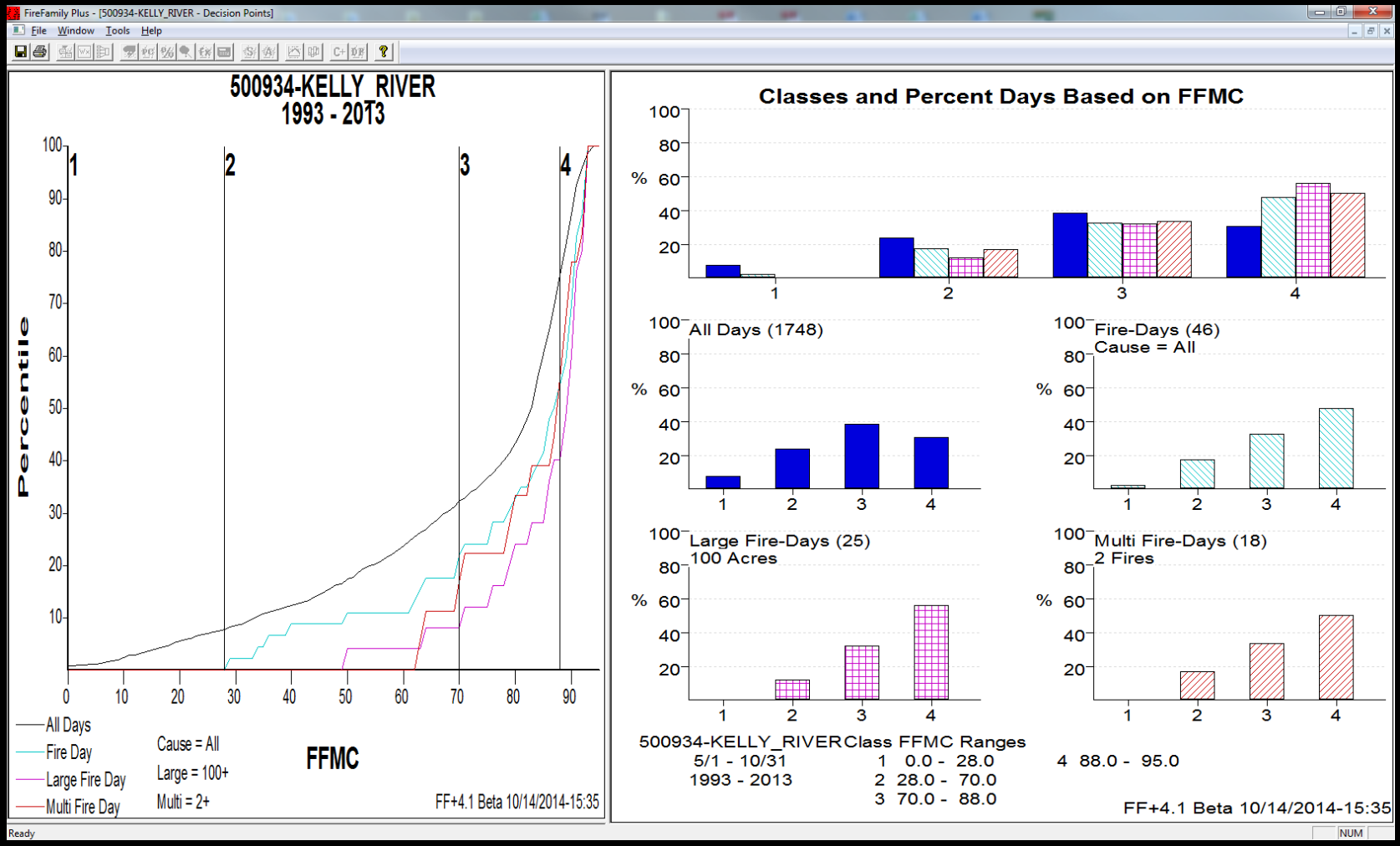
Planning

Western Arctic Parkland: Fire Management Plan. Step-Up Staffing



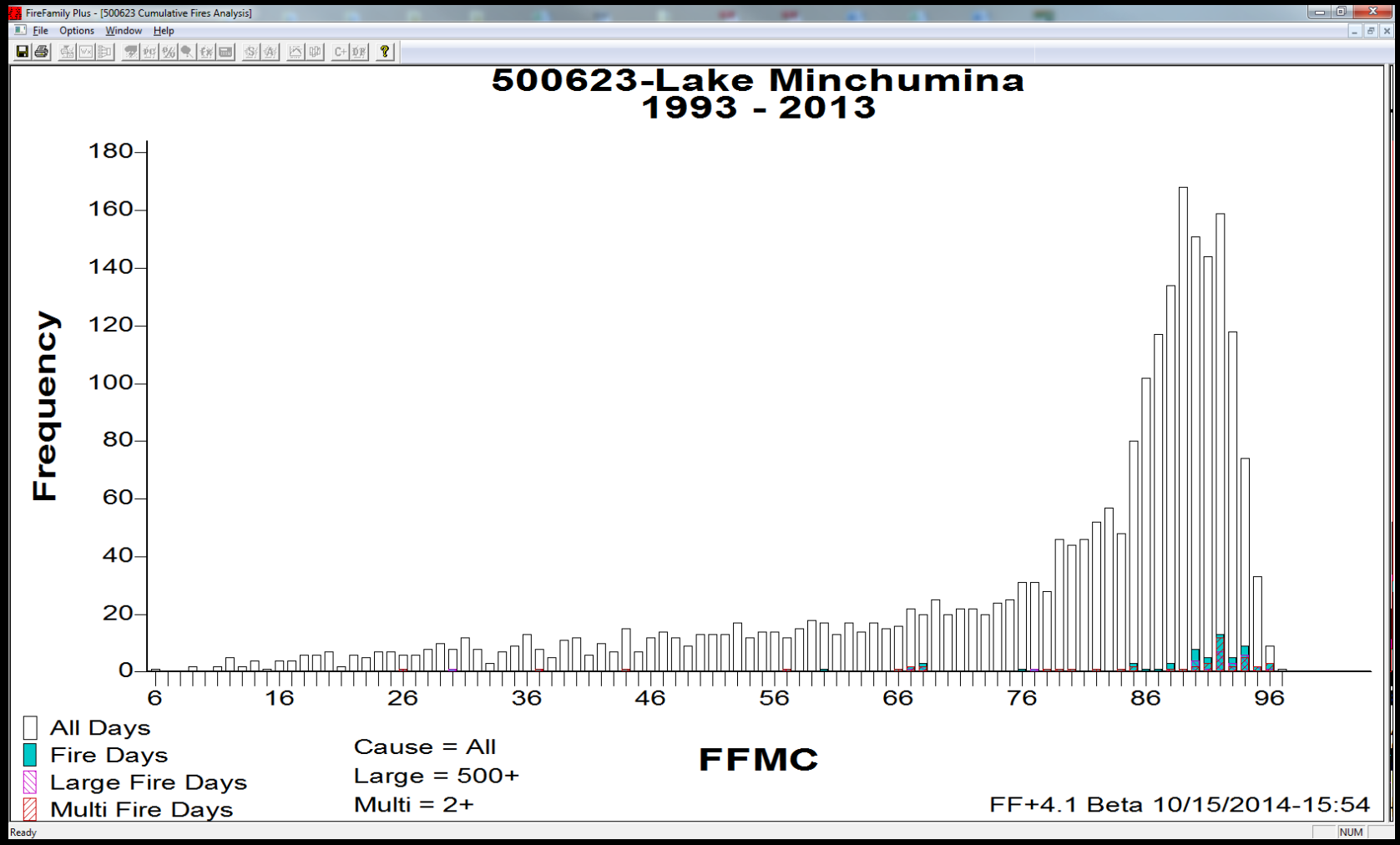
Planning

Step-Up Staffing analysis comparison: Western Arctic National Parklands



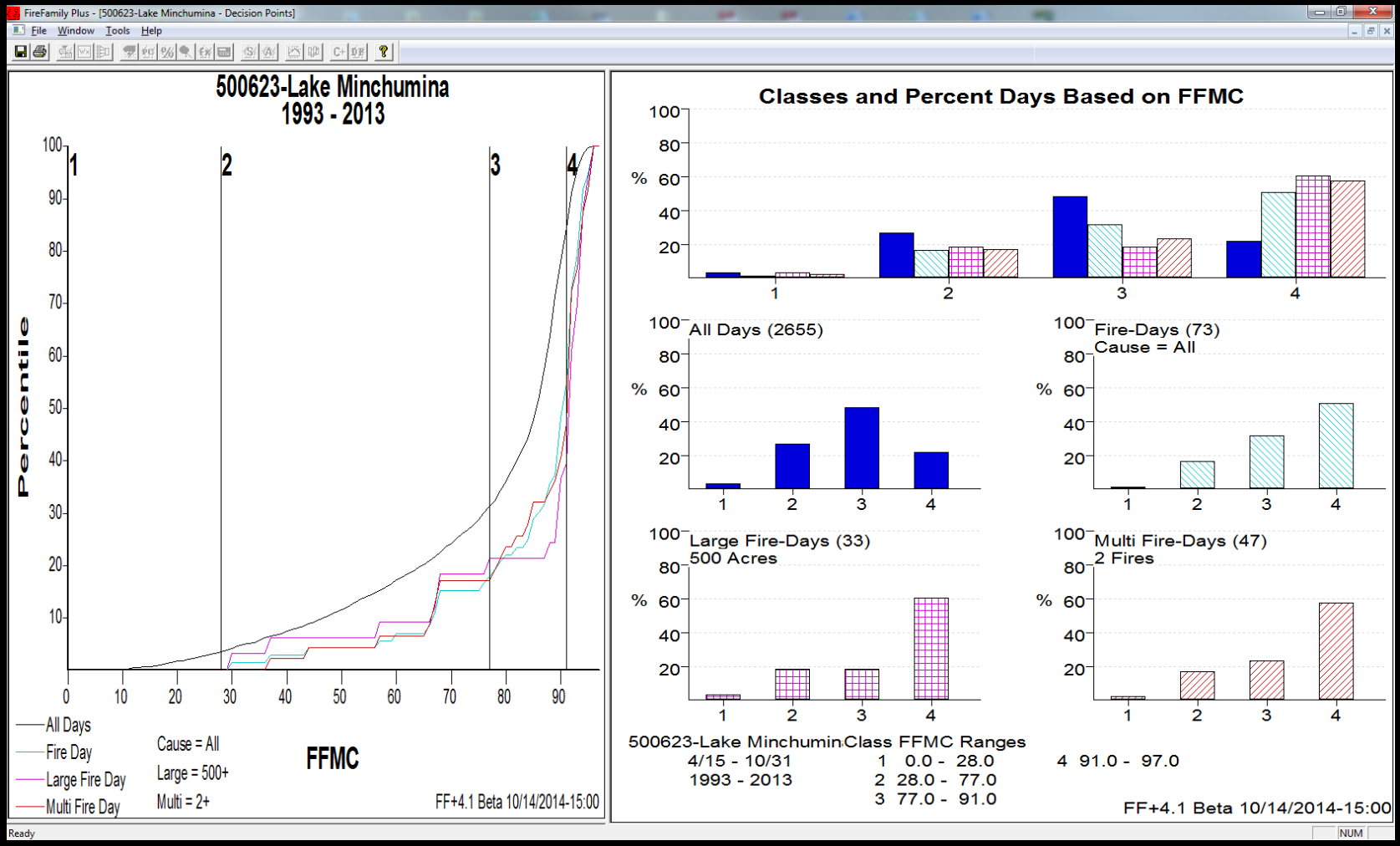
Planning

Step-Up Staffing analysis comparison:
Denali NP&P



Planning

Step-Up Staffing analysis comparison: Denali NP&P



Planning

Western Arctic Parkland: Fire Management Plan. Step-Up Staffing

Complexity Level

Fire Indices	0-3 fires	3-6 fires	6+ fires
FFMC=<70	LOW COMPLEXITY LEVEL	LOW COMPLEXITY LEVEL	MODERATE COMPLEXITY LEVEL
FFMC=71-88	LOW COMPLEXITY LEVEL	MODERATE COMPLEXITY LEVEL	HIGH COMPLEXITY LEVEL
FFMC=88+	MODERATE COMPLEXITY LEVEL	HIGH COMPLEXITY LEVEL	HIGH COMPLEXITY LEVEL

Preparedness Level

Values at Risk

Complexity	Low	Moderate	High
Low	Low Preparedness Level	Low Preparedness Level	Moderate Preparedness Level
Moderate	Low Preparedness Level	Moderate Preparedness Level	High Preparedness Level
High	Moderate Preparedness Level	High Preparedness Level	High Preparedness Level

Severity Request

United States Department of the Interior
NATIONAL PARK SERVICE
DENALI NATIONAL PARK AND PRESERVE

June 13, 2013

MEMORANDUM

To: Dan Warthin, Fire Management Officer, AKR

From: Don Striker, Superintendent, Denali National Park and Preserve

Subject: June 2013 Fire Severity Request, Denali National Park and Preserve/Alaska Western Parks Group

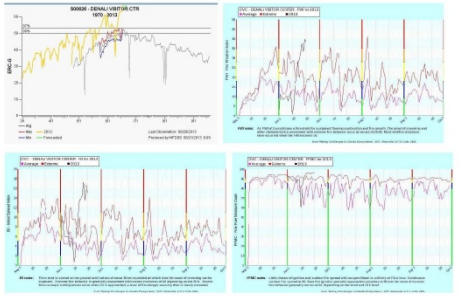
Denali National Park and Preserve is requesting severity funding in order to augment fire prevention efforts as described in the attached severity request.

This request has been formulated after consultation with our cooperators: Tanana Zone, Alaska Fire Service BLM, and Fairbanks Area Forestry, Department of Natural Resources, State of Alaska. These two Protection Agencies that provide wildfire suppression services for the high fire frequency portion of Denali are also presently operating under approved severity funding. Both of these agencies are running extended staffing, placed preposition orders. Pre-po orders are to augment and or replenish depleted initial attack resources (Overhead resources including – ICT3, DIV, ICT4, ICT5, ENGB, heavy tankers, SEATs, Type 2 Helicopters, additional relief pilots, etc.). In addition Alaska Fire Service is or has submitted a severity request.

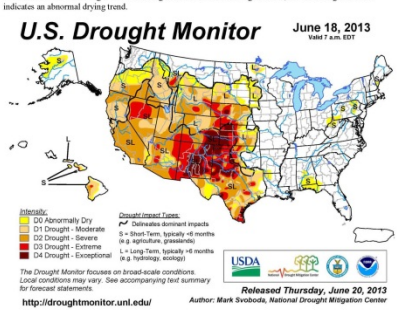
Narrative and quantification of need:
A summary of preceding and current conditions at Denali NP&P and the greater Denali Area are as follows: This winter and spring brought average snowfall and temperatures. An near record cool spring (April into mid-May) delayed snowfree conditions thus further delaying green-up. The sudden shift from unseasonably cool conditions to above average temperatures, created a rapid snowmelt period that exposed fully cured vegetation at the onset of the lightning season. A persistent high pressure ridge has set up over the state, starting approx. June 10 and has consistently created Red Flag conditions. Red Flags (generally due to low RH) were effect for all weather zones across the mainland Alaska, including Denali, with the exception of north of the Brooks Range. Current Red Flag Conditions are for high winds, including the Denali area. Fire Danger (Canadian Forest Fire Danger Rating System, CFFDRS is utilized in Alaska in lieu of NFDRS) charts show the greater Denali Area in near or setting record high Fire Weather Indices for this time of year (since June 10th), with the Fine Fuel Moisture Code (FFMC) and Initial Spread Index (ISI) also setting records. The ERCs utilized for fire potential in WFDSS for spatial fire behavior modeling has general been above the 90th percentile since May 4th with three approximately week long periods above the 97th percentile. The ERC is currently above the 99th percentile (1993-2013) and the fire potential outlook prediction indicates the ERC will remain above the 99th percentile over the next 7 days. The closest Fire Protection Agency is located 120 miles north of Park Headquarters (2 hours by road, 40 minutes by helicopter). Fire Danger this weekend is expected to lesson however and the high pressure ridge is expected to establish over the next week and resume the hot and dry conditions. The cumulative effect of multiple high pressure systems is creating conditions similar to the banner years of 2004 and 2005. Current GACC Planning Level is 3. The outlook is "normal" fire season statewide with moderate confidence. The 7 day Significant Fire Potential is "Very dry" (ERC 68-75, 90th Percentile). Starting mid-June through mid-July is the highest period of recorded fire starts in Denali. By mid-July the typical monsoonal patterns will dictate whether fire potential increases. Fewer than normal fire resources exist in Denali due to budget cuts and sequestration. Denali is in the midst of it's condensed summer visitation season with approximately 400,000 visitors annually. The vast majority of the visitors utilize the Denali Frontcountry where the majority of park infrastructure and use is concentrated in a relatively small area with one road in and out of the Park/Preserve.

Situation:
Fire Danger Models:
The Canadian Fire Danger Rating System is utilized in Alaska. The indices below are an indicator of receptiveness of the surface fuel bed (Fine Fuel Moisture Code – FFMC), indicator of fire growth potential (Initial Spread Index - ISI) and a overall condition of the fuel bed (Fire Weather Index). Included is a NFDRS ERC graph for comparison.

Denali Visitor Center RAWS

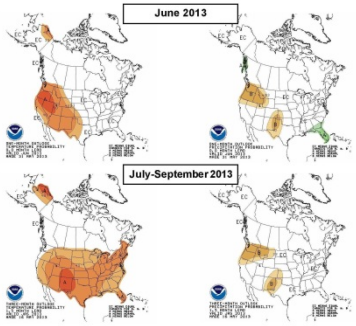


Precipitation/drought:
In addition to the Fire Danger charts showing record of near record high indices; the US Drought Monitor indicates an abnormal drying trend.



The outlook indicates above normal temperatures for the northern 1/3 of the state for June, the northern 2/3 of the state in July and September and inconclusive precipitation forecast, leading to persisting and intensifying drought:

Top row: One-month (June) outlook for temperature (left) and precipitation (right). Bottom row: Three month (July-September) outlook for temperatures (left) and precipitation (right). *(from Climate Prediction Center/NOAA)*



37 new fires were discovered yesterday in the state and only portion on of the state has received surveillance. Addition lightning is forecasted for today. 4,207 strikes recorded yesterday and 2,122 by 1630 today (6/21/13). Local residence and communities are concerned due to the extremely dry conditions and high fire danger. Increased prevention activities will help minimize the chance of human caused ignitions and the increased presence will assist in visitor and community concerns.

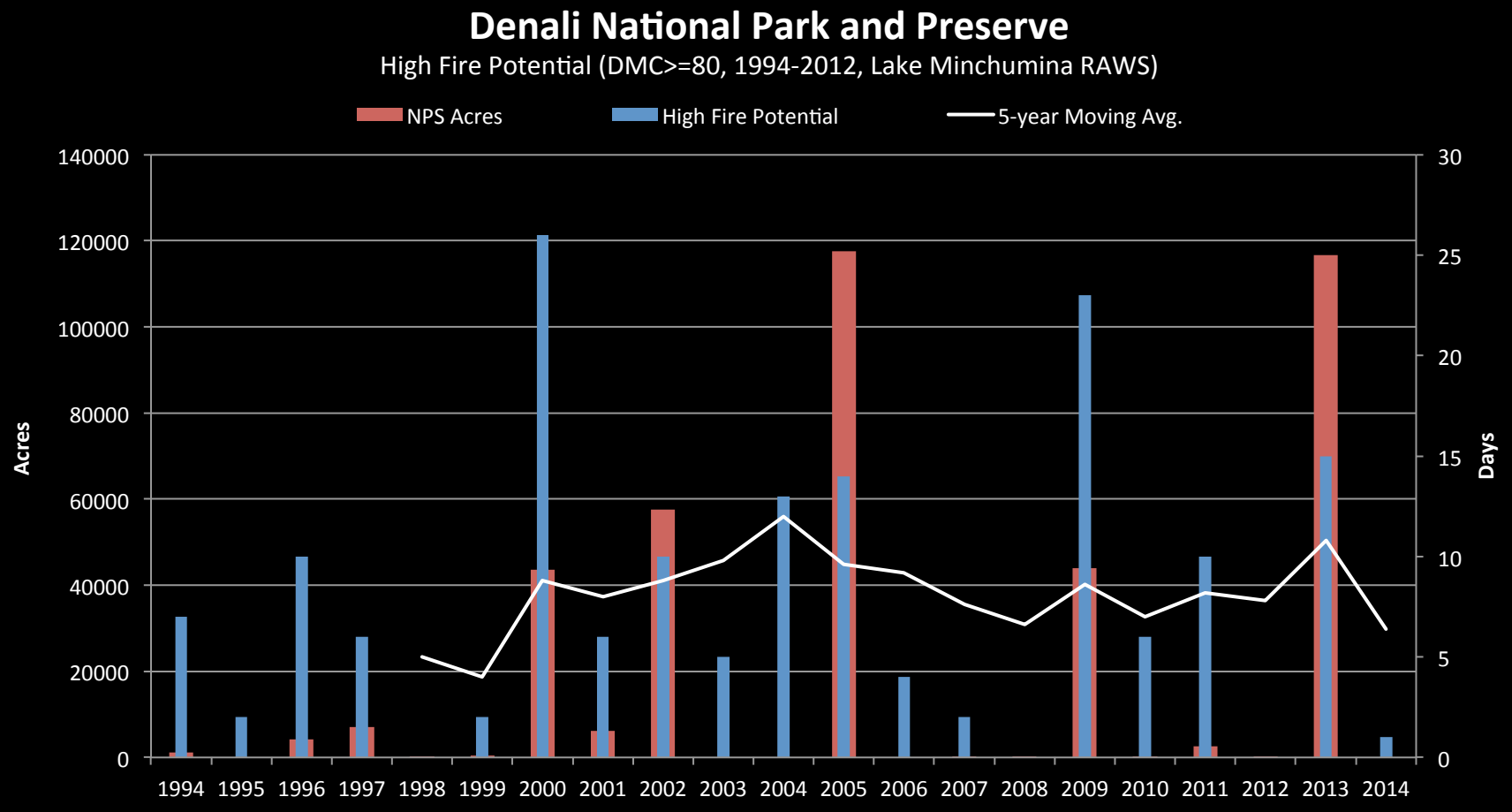
Severity request:

The severity request is for prevention activities throughout Denali from June 13 to July 12, 2013 for $17,624; however with current conditions in Alaska which are similar to banner fire seasons in 2004 and 2005 and large fires are occurring in Alaska, I do not predict that the full amount will be used as resources get committed to fires. Mid-July typically brings thunderstorms and lightning with monsoonal pushes into the area. Furthermore careful management of resources will occur to reduce staffing duration on any days with less conducive conditions, and every effort will be made to reduce costs as well.

Don Striker
Superintendent
Denali National Park and Preserve

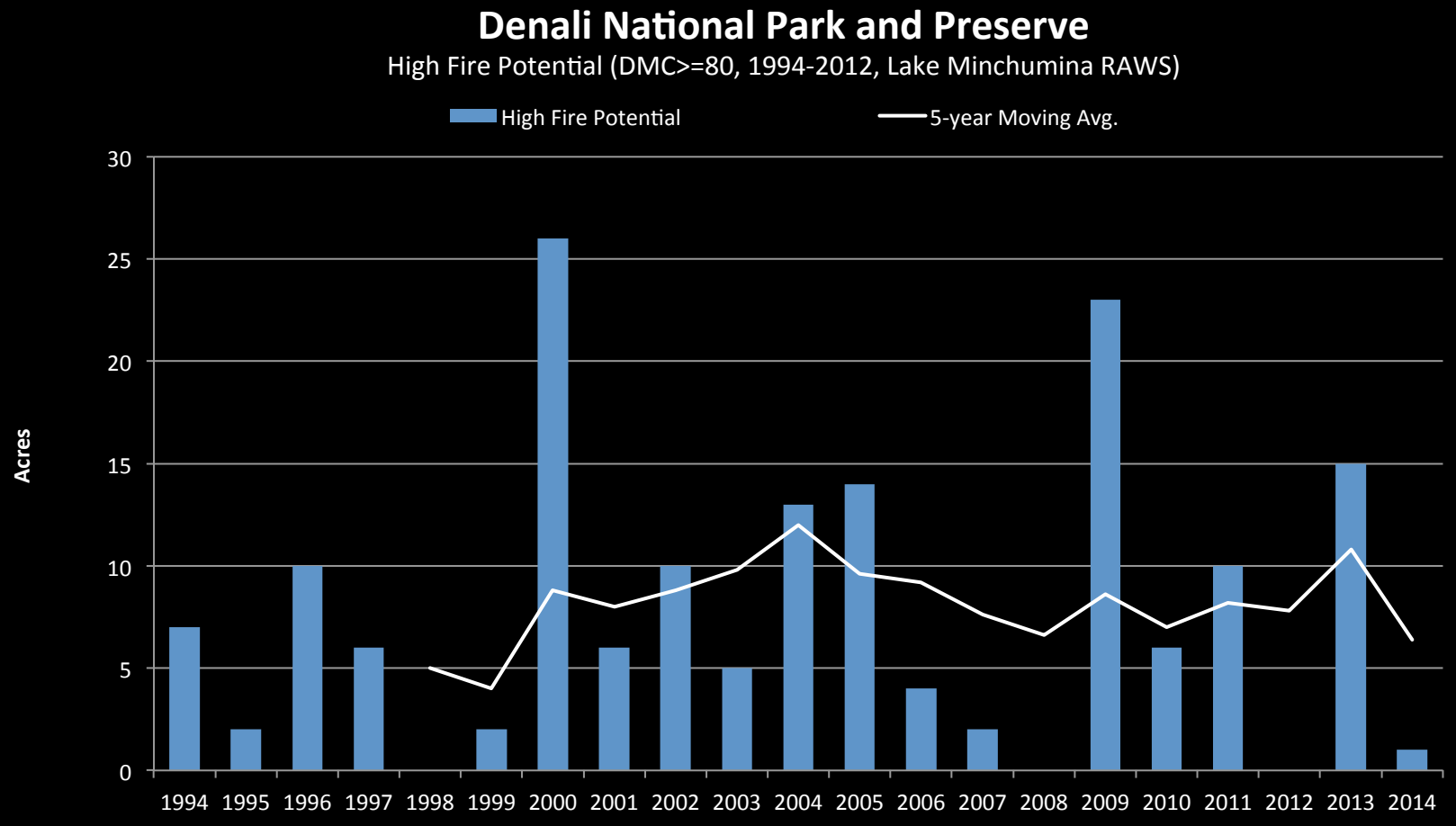
Monitoring

Denali NP&P – State of the Park Report (Example 1)



Monitoring

Denali NP&P – State of the Park Report (Example 1)



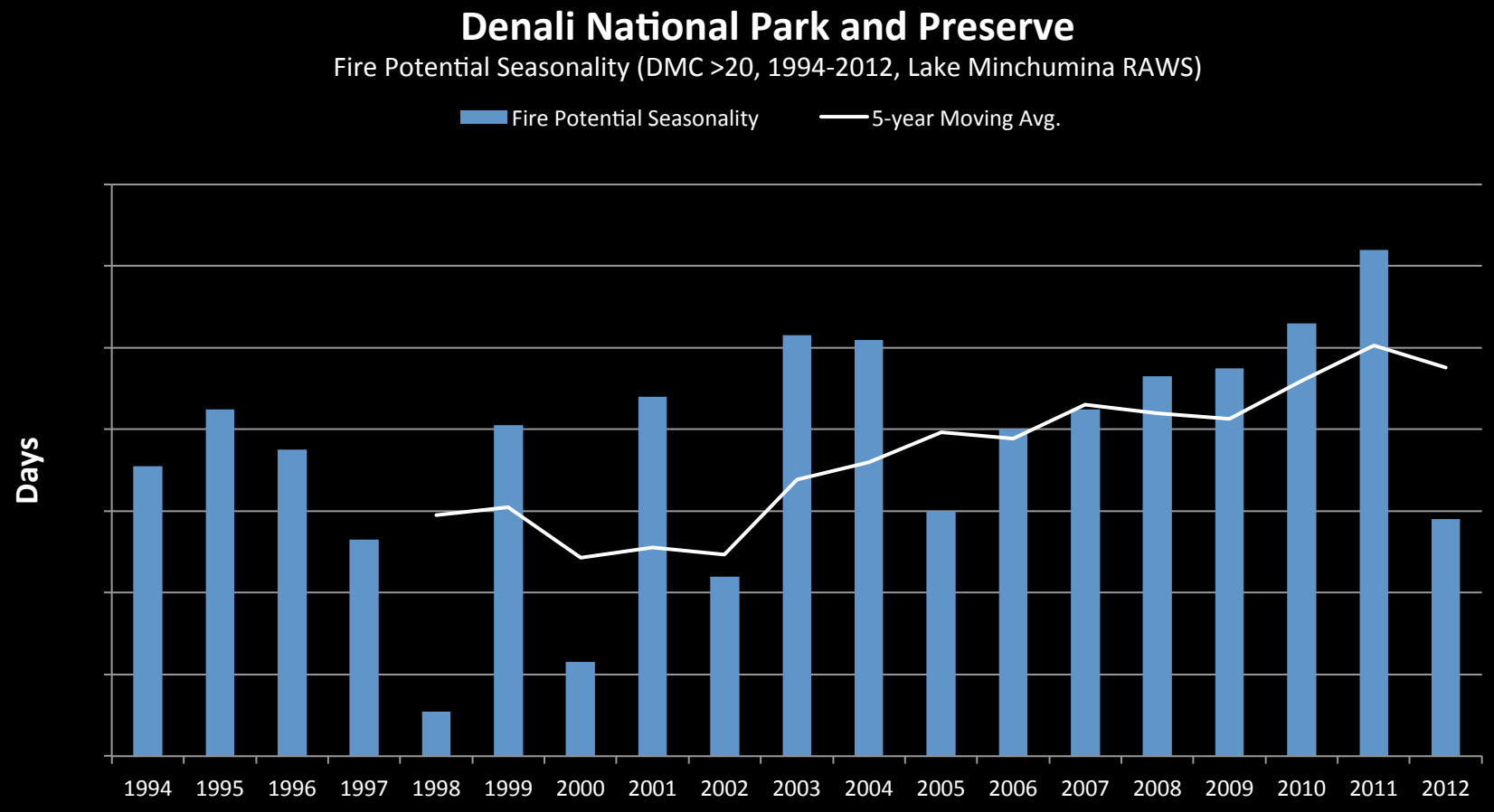
Monitoring

Denali NP&P – State of the Park Report (Example 1)

Natural Resources			
Priority Resource or Value -- **Wildlife Habitat and Ecosystem Function: Terrestrial**			
Indicators of Condition	Specific Measure	Condition Status/Trend	Rationale
Fire Regime	High Fire Potential - number of days the duff moisture code*** (DMC) is above 80 (very dry) (the range of natural variability is defined as that during 1994-2010)		During 1994-2010, at Lake Minchumina RAWS (a weather station), High Fire Potential averaged 8 days, (the range was 0 to 26). During 2008-2012, the High Fire Potential average was 7.8 days (the range was 4 to12) (AICC 2012, Weddle unpublished data 2012a). [Link to unpublished FWI analysis] ***The Duff Moisture Code is a fire danger index approximating the availability of subsurface fuels and the ease of their flammability.

Monitoring

Denali NP&P – State of the Park Report (Example 2)



Wildfire

Jurisdictional Agency Decision Support - CFFDRS

- FFMC
  - Surface fire support potential
  - Strongest relationship with new fire starts
    - Coupled with wind (ISI), proximity to values at risk or higher protection level FMUs
  - 90 trigger
- DMC
  - Natural ignition persistence
  - Potential for locating new starts from lightning
  - Maximum 5 point daily recovery (80 degrees, 30 RH)
  - 60 trigger

Wildfire

Jurisdictional Agency Decision Support - CFFDRS

- DC
  - Duration, persistence to significant rain events
    - Proximity to values at risk or higher protection level FMUs considering potential fire duration.
    - Growth Potential - Likelihood of wildfire exposed to future extreme weather event.
  - Resource commitment exposure/time/cost
  - 400 trigger